

# A LIFE COURSE APPROACH TO INEQUALITY: EXAMINING RACIAL/ETHNIC DIFFERENCES IN THE RELATIONSHIP BETWEEN EARLY LIFE SOCIOECONOMIC CONDITIONS AND ADULT HEALTH AMONG MEN

Taylor W. Hargrove, MA; Tyson H. Brown, PhD

**Objective:** Previous research has documented a relationship between childhood socioeconomic conditions and adult health, but less is known about racial/ethnic differences in this relationship, particularly among men. This study utilizes a life course approach to investigate racial/ethnic differences in the relationships among early and later life socioeconomic circumstances and health in adulthood among men.

**Design:** Panel data from the Health and Retirement Study and growth curve models are used to examine group differences in the relationships among childhood and adult socioeconomic factors and age-trajectories of self-rated health among White, Black and Mexican American men aged 51-77 years ( $N=4147$ ).

**Results:** Multiple measures of childhood socioeconomic status (SES) predict health in adulthood for White men, while significantly fewer measures of childhood SES predict health for Black and Mexican American men. Moreover, the health consequences of childhood SES diminish with age for Black and Mexican American men. The childhood SES-adult health relationship is largely explained by measures of adult SES for White men.

**Conclusion:** The life course pathways linking childhood SES and adult health differ by race/ethnicity among men. Similar to arguments that the universality of the adult SES-health relationship should not be assumed, results from our study suggest that scholars should not assume that the significance and nature of the association between childhood SES and health in adulthood is similar across race/ethnicity among men. *Ethn Dis.* 2015;25(3):313-320.

**Key Words:** Life Course, Race/ethnicity, Health

## INTRODUCTION

Social science and public health scholars are increasingly using life course approaches to understand health disparities in adulthood. A life course perspective suggests that social factors and exposures interact throughout the life span to affect the risk of disease and mortality, as well as produce social inequality in health.<sup>1</sup> Indeed, there is growing evidence that circumstances in early life directly and indirectly affect health in adulthood,<sup>2-6</sup> and partially account for racial disparities in adult health.<sup>7</sup> Prominent explanatory frameworks that have been used to understand racial/ethnic differences in health through a life course perspective emphasize the particularly important influences of cumulative processes, rather than single events, on shaping health throughout adulthood.<sup>8</sup> For example, the accumulation of risk model posits that childhood socioeconomic circumstances have deleterious

effects on adult health by placing individuals on varying social, economic, psychological, and behavioral trajectories that, in turn, affect health.<sup>4,9</sup>

While extant literature suggests that childhood socioeconomic disadvantage is associated with poorer adult health, our current understanding of the relationship between early life context and health in later life is limited due to critical gaps in the literature. Most notably, previous research has not sufficiently addressed the questions of whether there are racial/ethnic differences in the childhood socioeconomic disadvantage-adult health relationship, or in the accumulation of risk processes linking early socioeconomic conditions to health in adulthood. These gaps in our knowledge are largely a consequence of prior studies implicitly assuming that the relationship between childhood socioeconomic status (SES) and adult health (and the mechanism linking them) is universal. It is necessary, however, to explicitly examine how these processes operate within social groups given substantial differences in the lived experiences of Whites and racial/ethnic minorities. For example, though greater socioeconomic resources in adulthood (eg, education, income, and wealth)

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From the Sociology Department, Vanderbilt University, Nashville, Tenn. (TWH, THB)

Address correspondence to Taylor Hargrove; Vanderbilt University, Department of Sociology; VU Station B351811; Nashville, TN 37235; taylor.w.hargrove@vanderbilt.edu

are generally associated with better health across an array of health measures,<sup>10</sup> a growing body of research suggests that adult socioeconomic resources may not confer the same degree of health benefits for racial/ethnic minorities as they do for Whites given increased exposure to stressors and opportunities for discrimination at higher levels of SES.<sup>11-13</sup> Consistent with the life course principle of time and place—that lives are shaped by historical times and places that are experienced over their lifetime<sup>14</sup>—the older Black and Mexican American men in this study (born between 1931 and 1947) have endured unique barriers to achieving socioeconomic success and good health due to their exposure to institutional and interpersonal racism in the United States for more than a half century. Consequently, men of color may experience diminished—or no—health returns to the acquisition of traditional socioeconomic resources.<sup>13</sup> Moreover, Black and Hispanic men experience a number of specific disadvantages and stressors associated with trying to fulfill and display hegemonic masculinity and normative gender expectations in spite of their limited socioeconomic opportunities.<sup>15,16</sup> The joint consequences of gender and race also manifest in men of color's disproportionately high rates of incarceration, unemployment, and homicide.<sup>15,17</sup> Given evidence that challenges the notion of monolithic health benefits of adult socioeconomic resources,<sup>12,13</sup> in tandem with the specific stressors and experiences men of color tend to face, it is possible that the child socioeconomic disadvantage-adult health relationship may also

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vary by race/ethnicity among men.

In order to develop efficacious strategies for eliminating health disparities along socioeconomic and racial/ethnic lines, both researchers and policymakers need a better understanding of the lifelong social determinants of health among different racial/ethnic groups. Our study extends previous research by utilizing a life course perspective to understand early and later life influences on adult health. The primary aims of our study are to examine racial/ethnic differences in: 1) the association between childhood socioeconomic conditions and self-rated health trajectories in middle and late life; and 2) the socioeconomic achievement processes that link SES of origin to adult health.

## METHODS

### Sample

This study utilizes Waves 1-10 of the Health and Retirement Study (HRS), a nationally representative, longitudinal panel study of adults, aged >50 years in the contiguous United States. Respondents were interviewed biennially between 1992

and 2010 (response rates were between 82% and 89%). The baseline interviews for the HRS (born between 1931-1941) and War Baby birth cohorts (born between 1942-1947) were in 1992 and 1998, respectively. Our final analytic sample includes 3,327 White men, 580 Black men, and 240 Mexican American men.

### Outcomes

Self-rated health was measured by respondents' answers to the question, "In general, would you say your health is: excellent, very good, good, fair, or poor?"; responses ranged from 1 (poor) to 5 (excellent). Self-rated health is a reliable and valid measure of general health status, has similar predictive validity for mortality and objective health measures across racial/ethnic and gender subgroups,<sup>18,19</sup> and does not rely on physician diagnoses.

### Covariates

Binary variables index self-reported race/ethnicity: non-Hispanic White (yes=1), non-Hispanic Black (yes=1), and Mexican American (yes=1). Only US-born Whites and Blacks were considered, and all analyses for Mexican Americans control for nativity (US born=1) given the well-documented immigrant health advantage.<sup>20</sup> The key predictors of interest were five measures of early life conditions. Mother's education and father's education measure whether the respondent's mother and father completed 12 years or more of schooling (yes=1). Respondents' socioeconomic circumstances and living arrangements before the age of 16 were indexed by binary variables, including whether the respondent

grew up in poverty (yes=1), ever had to move due to financial difficulties (yes=1), and whether the respondent's father had a white collar job (yes=1). The adult SES measures considered in this study include educational attainment (years of schooling), household income (logged measure of all wages and salaries from household members), and household wealth (logged measure of net worth).

Our study controls for several sociodemographic characteristics known to influence adult health, including marital status (married/partnered=1), labor force participation (in the labor force=1), and self-rated health in childhood.<sup>21</sup> In order to avoid confounding age-related changes with cohort differences, analyses control for both age (in years) and birth cohorts, (war baby cohort=1).<sup>22,23</sup> Additionally, to control for varying rates of response to early life measures, binary variables of whether respondents were missing on each childhood condition are included. Lastly, differential rates of dropout and death attrition are taken into account by two measures: the number of waves the respondent is missing and whether the respondent died during observation (yes=1).<sup>22</sup> For the sake of concision, coefficients for the control variables are not presented (available upon request).

**Statistical Analyses**

First, t-test and chi-square statistics were used to determine whether there were racial/ethnic differences in health, childhood SES, and adult SES. Second, we utilized random coefficient growth curve models, stratified by race/ethnicity, to examine racial/ethnic differences in the rela-

**Table 1. Weighted means and proportions of study variables by race and ethnicity<sup>a</sup>**

	White men	Black men	Mexican American men
Self-rated health	3.389	2.914 <sup>b</sup>	2.821 <sup>b</sup>
Childhood SES			
Mother's education	.567	.380 <sup>b</sup>	.219 <sup>b</sup>
Father's education	.496	.418 <sup>b</sup>	.244 <sup>b</sup>
Childhood poverty	.290	.450 <sup>b</sup>	.512 <sup>b</sup>
Ever moved because of finances	.177	.189 <sup>b</sup>	.236 <sup>b</sup>
Father had white-collar job	.258	.058 <sup>b</sup>	.058 <sup>b</sup>
Adult SES			
Years of education	13.125	11.057 <sup>b</sup>	7.946 <sup>b</sup>
Income, Ln	10.640	9.938 <sup>b</sup>	9.393 <sup>b</sup>
Net worth, Ln	11.571	8.590 <sup>b</sup>	9.096 <sup>b</sup>
Controls			
HRS cohort	.779	.809 <sup>b</sup>	.793 <sup>b</sup>
War baby cohort	.221	.191 <sup>b</sup>	.207 <sup>b</sup>
Age	71.091	71.381	70.938
Married	.838	.656 <sup>b</sup>	.803 <sup>b</sup>
In labor force	.630	.508 <sup>b</sup>	.566 <sup>b</sup>
Health in childhood	4.245	4.083 <sup>b</sup>	3.913 <sup>b</sup>
Missing waves	1.312	1.737 <sup>b</sup>	1.442 <sup>b</sup>
Died	.216	.321 <sup>b</sup>	.231 <sup>b</sup>
US born	--	--	.595
N	3,327	580	240

a. T-test and chi square statistics (ref group = White men).

b. P<.05

tionships among early life SES, adult SES, and age trajectories of self-rated health between the ages 51 and 77 years. This approach allowed for the estimation of person-specific intercepts (initial value) and slopes (rate of change) that describe intra-individual patterns of change in health as a function of age. Regressing early and later life socioeconomic factors on the self-rated health intercepts and slopes provided information about how these factors affect the pattern of health over time. For each racial/ethnic group, Models in Table 2 display only the significant independent effect of each childhood SES condition on the health intercepts (levels at age 51) and age slopes (rates of change with age), net of demographic control

variables ("A" models correspond to White men, and "B" and "C" models correspond to Black and Mexican American men, respectively). Models in Table 3 add adult educational attainment, household income, and wealth (net of demographic controls as well as marital and employment status) to examine the extent to which adult SES mediates the effects of childhood socioeconomic context on adult health trajectories.

**RESULTS**

The descriptive statistics from Table 1 indicate that Black and Mexican American men report worse health than their White counterparts, and

that they are also disadvantaged in terms of childhood and adult socioeconomic circumstances. Compared with White men, a greater proportion of Black and Mexican American men have less educated parents, grew up in poverty, had to move due to financial difficulties, and did not grow up with a father who held a white-collar job. Men of color also have lower levels of educational attainment, income, and wealth in adulthood.

Table 2 displays growth curve models examining the independent effects of childhood socioeconomic conditions on self-rated health at aged 51 years and changes in health with age. Only models with significant effects of childhood SES are

displayed. Models 1A-5A of Table 2 indicate that each childhood socioeconomic condition has a significant independent effect on health in the expected directions for White men. White men who grew up with a mother and/or father with at least a high school education, did not grow up in poverty, never moved because of financial difficulties, and had a father with a white-collar job reported better health at age 51 years than their socioeconomically disadvantaged counterparts. The lack of significant coefficients of childhood conditions on the age slopes suggests that the effects of these early life SES measures do not vary between ages 51 and 77.

Models 1B-3B of Table 2 indicate

that only three of the five childhood socioeconomic conditions significantly affect Black men's health. Black men whose parents had at least a high school education and never moved because of financial difficulties report better health at aged 51 years compared with their more disadvantaged counterparts. The combination of significant coefficients on the intercepts and slopes for mother's education and moving for financial reasons suggest that, among Black men, the health consequences of mother's education and moving diminish with age (Models 1B, 3B). Lastly, Models 1C and 2C of Table 2 indicate that only childhood poverty and moving because of financial difficulties predict worse

**Table 2. Effects of early life socioeconomic conditions on self-rated health trajectories among White, Black, and Mexican American Men aged 51-77 years<sup>a</sup>**

	Whites					Blacks			Mexican Americans	
	Model 1A	Model 2A	Model 3A	Model 4A	Model 5A	Model 1B	Model 2B	Model 3B	Model 1C	Model 2C
Fixed Effects										
Intercept	3.442 <sup>d</sup>	3.453 <sup>d</sup>	3.556 <sup>d</sup>	3.489 <sup>d</sup>	3.416 <sup>d</sup>	2.192 <sup>b</sup>	2.257 <sup>b</sup>	2.696 <sup>c</sup>	3.079 <sup>b</sup>	2.908 <sup>b</sup>
Childhood SES										
Mother's education	.263 <sup>d</sup>					.463 <sup>d</sup>				
Father's education		.278 <sup>d</sup>					.471 <sup>d</sup>			
Childhood poverty			-.204 <sup>d</sup>						-.377 <sup>b</sup>	
Ever moved because of finances				-.110 <sup>b</sup>				-.294 <sup>b</sup>		-.441 <sup>b</sup>
Father had white-collar job					.338 <sup>d</sup>					
War baby cohort	-.240 <sup>d</sup>	-.216 <sup>d</sup>	-.210 <sup>d</sup>	-.203 <sup>d</sup>	-.212 <sup>d</sup>	-.313 <sup>b</sup>	-.232	-.261	-.167	-.161
Linear slope, Age	-.013 <sup>b</sup>	-.013 <sup>b</sup>	-.012 <sup>b</sup>	-.012 <sup>b</sup>	-.013 <sup>b</sup>	.006	.004	-.002	-.014	-.011
Childhood SES										
Mother's education	-.002					-.018 <sup>b</sup>				
Father's education		-.002					-.015			
Childhood poverty			-.002						.024 <sup>b</sup>	
Ever moved because of finances				-.002				.017 <sup>b</sup>		.029 <sup>b</sup>
Father had white-collar job					-.003					
War baby cohort	.003	.003	.002	.002	.003	.005	.002	.002	.001	.001
Random Effects										
Level 1 Residual	.643 <sup>d</sup>	.643 <sup>d</sup>	.643 <sup>d</sup>	.643 <sup>d</sup>	.643 <sup>d</sup>	.740 <sup>d</sup>	.740 <sup>d</sup>	.740 <sup>d</sup>	.753 <sup>d</sup>	.754 <sup>d</sup>
Level 2 Age	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.046 <sup>d</sup>	.047 <sup>d</sup>	.046 <sup>d</sup>	.051 <sup>d</sup>	.050 <sup>d</sup>
Level 2 Intercept	2.813 <sup>d</sup>	2.820 <sup>d</sup>	2.826 <sup>d</sup>	2.828 <sup>d</sup>	2.821 <sup>d</sup>	3.219 <sup>d</sup>	3.243 <sup>d</sup>	3.227 <sup>d</sup>	3.452 <sup>d</sup>	3.397 <sup>d</sup>
-2 Log Likelihood	61562	61567	61609	61642	61576	11325	11331	11341	4927	4923

a. All models control for childhood health, missings on early life conditions, attrition, and nativity.

b. *P* < .05.

c. *P* < .01.

d. *P* < .001.

**Table 3. Effects of early and later life conditions on self-rated health trajectories among White, Black, and Mexican American Men Aged 51-77 years<sup>a</sup>**

	Whites					Blacks			Mexican Americans	
	Model 1A	Model 2A	Model 3A	Model 4A	Model 5A	Model 1B	Model 2B	Model 3B	Model 1C	Model 2C
Fixed Effects										
Intercept	3.397 <sup>d</sup>	3.390 <sup>d</sup>	3.415 <sup>d</sup>	3.385 <sup>d</sup>	3.367 <sup>d</sup>	2.816 <sup>c</sup>	2.894 <sup>d</sup>	3.398 <sup>d</sup>	2.682	2.426
Childhood SES										
Mother's education	.109 <sup>c</sup>					.300 <sup>b</sup>				
Father's education		.120 <sup>c</sup>					.310 <sup>b</sup>			
Childhood poverty			-.091 <sup>b</sup>						-.361 <sup>b</sup>	
Ever moved because of finances				-.037				-.286 <sup>b</sup>		-.444 <sup>b</sup>
Father had white-collar job					.138 <sup>c</sup>					
Adult SES										
Years of education	.131 <sup>d</sup>	.139 <sup>d</sup>	.151 <sup>d</sup>	.150 <sup>d</sup>	.137 <sup>d</sup>	.231 <sup>d</sup>	.231 <sup>d</sup>	.260 <sup>d</sup>	.062	.051
Income, Ln	.125 <sup>b</sup>	.125 <sup>b</sup>	.126 <sup>b</sup>	.129 <sup>b</sup>	.125 <sup>b</sup>	.145	.150	.150	-.059	-.052
Net worth, Ln	.020	.021	.021	.021	.021	.007	.007	.008	-.093	-.097
War baby cohort	-.261 <sup>d</sup>	-.256 <sup>d</sup>	-.253 <sup>d</sup>	-.251 <sup>d</sup>	-.251 <sup>d</sup>	-.359 <sup>c</sup>	-.316 <sup>b</sup>	-.324 <sup>b</sup>	-.243	-.238
Linear slope, age	-.011 <sup>b</sup>	-.011 <sup>b</sup>	-.010	-.010	-.010	-.002	-.004	-.011	-.003	.001
Childhood SES										
Mother's education	-.001					-.013				
Father's education		-.001					-.011			
Childhood poverty			-.003						.024 <sup>b</sup>	
Ever moved because of finances				-.003				.016 <sup>b</sup>		.029 <sup>b</sup>
Father had white-collar job					-.002					
Adult SES										
Years of education	-.001	-.001 <sup>b</sup>	-.001 <sup>b</sup>	-.001 <sup>b</sup>	-.001	-.003 <sup>c</sup>	-.003 <sup>c</sup>	-.003 <sup>d</sup>	.000	.000
Income, Ln	-.002 <sup>b</sup>	-.002 <sup>b</sup>	-.002 <sup>b</sup>	-.002 <sup>b</sup>	-.002 <sup>b</sup>	-.002	-.002	-.002	.001	.001
Net worth, Ln	.000	.000	.000	.000	.000	.000	.000	.000	.002	.002
War baby cohort	.002	.002	.002	.002	.002	.008	.005	.005	-.001	-.001
Random Effects										
Level 1 Residual	.644 <sup>d</sup>	.644 <sup>d</sup>	.644 <sup>d</sup>	.644 <sup>d</sup>	.644 <sup>d</sup>	.742 <sup>d</sup>	.742 <sup>d</sup>	.742 <sup>d</sup>	.752 <sup>d</sup>	.752 <sup>d</sup>
Level 2 Age	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.043 <sup>d</sup>	.042 <sup>d</sup>	.051 <sup>d</sup>	.050 <sup>d</sup>
Level 2 Intercept	2.736 <sup>d</sup>	2.739 <sup>d</sup>	2.737 <sup>d</sup>	2.738 <sup>d</sup>	2.738 <sup>d</sup>	2.941 <sup>d</sup>	2.957 <sup>d</sup>	2.919 <sup>d</sup>	3.408 <sup>d</sup>	3.360 <sup>d</sup>
-2 Log Likelihood	61113	61113	61110	61120	61115	11213	11217	11216	4862	4860

a. All models control for childhood health, missings on early life conditions, attrition, nativity, as well as marital status and employment status.  
 b.  $P < .05$ .  
 c.  $P < .01$ .  
 d.  $P < .001$ .

health at aged 51 years for Mexican American men. Additionally, the negative coefficients for childhood poverty and moving due to finances on the intercept in combination with their positive coefficients on the age slopes suggests that the health consequences of childhood poverty and moving for financial reasons diminish with age.

Models presented in Table 3 examine the joint impacts of childhood and adult SES measures on self-rated health trajectories. For White men

(Models 1A-5A), the inclusion of adult SES completely explains the relationship between moving for financial reasons and health at aged 51 years, as well as reduces the effect of mother and father's education, childhood poverty, and father's occupational status by about 59%, 57%, 56%, and 59%, respectively. Higher levels of adult education and household income are also associated with better health at aged 51 years. Moreover, the significant positive coeffi-

cients for education and income on the intercepts, and their significant negative coefficients on the slopes indicate that the effects of education and income diminish with age.

A comparison of the models for Black men in Table 2 and 3 ("B" models) indicates that adult SES reduces the effect of mothers' and fathers' education and moving for financial reasons on health at aged 51 years by about 35%, 34%, and 3%, respectively. Adult SES also completely explains

the effect of parental education on the age slope, though it does not explain the effect of moving on the age slope. Furthermore, the positive coefficient for education on the intercept in tandem with the negative coefficient for education on the age slope suggests that Black men with higher levels of education have steeper health declines between ages 51 and 77 compared with their less-educated counterparts. Lastly, the inclusion of adult SES does not appreciably change the coefficients for childhood poverty or moving because of finances on either health intercepts or slopes for Mexican American men, nor are these resources directly predictive of self-rated health intercepts or age slopes (Models 1C and 2C of Table 3).

## DISCUSSION

This study extends previous research by examining racial/ethnic differences in the relationships among childhood socioeconomic conditions, adult SES, and health in later life among White, Black, and Mexican American men. Our results indicate that the relationship between childhood SES and adult health is weaker for men of color compared with White men, and that socioeconomic achievement processes better explain this relationship for White men than Black and Mexican American men. There are several plausible explanations for these findings. First, scholars have argued that socioeconomic resources and mobility do not have the same health benefits for racial/ethnic minorities as they do for Whites.<sup>13,24</sup> Historical and contemporary fac-

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tors (eg, segregation, discrimination, incarceration) have long restricted Black and Hispanic men's opportunities for economic success and, in turn, may have altered the meanings of various socioeconomic resources. For example, due to residential segregation, Black and Mexican American men are more likely than White men to live in disadvantaged neighborhoods with higher levels of environmental toxins, crime, exposure to stress, and poverty. These stark differences in neighborhood context, in conjunction with limited opportunities for Black and Mexican American

men to achieve hegemonic ideals of masculinity (eg, the role of economic provider),<sup>16</sup> suggest that differential neighborhood conditions and exposure to stressors across the life course likely contribute to health disparities in adulthood.<sup>25,26</sup> Second, achieving socioeconomic success might actually entail negative or less beneficial health consequences for minorities given increased exposures to discrimination and stress at higher levels of SES.<sup>13</sup> It is also important to recognize that the men of this study came of age during varying sociohistorical contexts, with older men of color spending a greater proportion of their lives living under Jim Crow and younger men of color benefitting more from civil rights legislation and increased educational opportunities. These differential life experiences may further alter the relationship between early life conditions and adult health for members of different birth cohorts.

This study is not without limitations. First, important factors that may be relevant to health, such as chronic stressors, discrimination, incarceration, and neighborhood conditions<sup>27</sup> are not consistently measured in childhood or adulthood. Future research should evaluate the extent to which "chains of risk" lead to poor health in adulthood, wherein negative (or positive) exposures in childhood may trigger similar negative (or positive) experiences in adulthood.<sup>1</sup> Second, we were unable to directly test competing hypotheses linking childhood socioeconomic factors to adult health, such as the biological imprinting hypothesis. Future research should investigate the degree to which alternative hypotheses ex-

plain the childhood SES-adult health relationship for men of color. Lastly, given that respondents in the study are aged 51-61 years at baseline, it is important to consider how mortality selection prior to midlife may affect the results. Higher rates of premature mortality among Black and Hispanic men compared with White men may result in a selective survival bias. Thus, our findings may be conservative and should be interpreted as conditional upon survival to midlife.

In spite of these limitations, this study suggests that the social determinants of health over the life course differ by race/ethnicity among men. The childhood socioeconomic conditions considered here do less to shape subsequent socioeconomic achievement and adult health for Black and Mexican American men compared with their White counterparts. Similar to theoretical arguments that the SES-health relationship in adulthood should not be assumed to be universal,<sup>13</sup> our findings suggest that the significance and nature of the association between early life context and health in adulthood may vary by race/ethnicity among men. Future research should examine the influence of factors aside from, and in tandem with, childhood socioeconomic context on health in adulthood, including stressors, discrimination, and neighborhood conditions. These studies will lead to policies that effectively address the diverse pathways to health among all adults.

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